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Two new species of *Exserticlava* and *Spiropes* on decaying wood from Guangdong, China

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Abstract — Two new anamorphic fungi, *Exserticlava manglietiae* on decaying branches of *Manglietia chingii* and *Spiropes terminaliae* on decaying branches of *Terminalia mantaly,* are described and illustrated. The specimens were collected from subtropical rainforests in Guangdong Province, China. Morphological differences between these two fungi and similar species are summarized.

Key words — anamorph, hyphomycete, microfungi, systematics

Hughes (1978) introduced *Exserticlava* to accommodate *Cordana vasiformis* Matsush. and *C. triseptata* Matsush., two species originally described on wood and bamboo from Japan (Matsushima 1975). *Exserticlava* is characterized by thick-walled, distoseptate conidia from polyblastic, funnel-shaped conidiogenous cells borne on mononematous, simple conidiophores (Tsui et al. 2001a). *Exserticlava* is similar to *Cacumisporium* Preuss and *Chloridium* Link in having sympodulo-phialides (Cole & Samson 1979) and holoblastic conidia formed from the apex of polyblastic conidiogenous cells. *Cacumisporium* differs from *Exserticlava* in euseptate conidia and cylindrical conidiogenous cells (Tsui et al. 2001b). Conidia in *Chloridium* are hyaline and aseptate (Gams & Holubová-Jechová 1976).

Ciferri (1955) established *Spiropes* with *S. guareicola* (F. Stevens) Cif. as type species. The genus is characterized by macronematous unbranched sometimes geniculate conidiophores, polyblastic, terminal and intercalary, sympodial cicatrized conidiogenous cells, numerous and conspicuous scars, and solitary acropleurogenous most commonly obclavate conidia with 1–9 transverse septa or distosepta.

During continuing research on saprobic fungi in subtropical forests of Guangdong Province, China, we collected two hyphomycetes that possess the morphological characteristics of *Exserticlava* and *Spiropes*. They differ morphologically from any described species and are, therefore, proposed as new to science. The type specimens are deposited in HSAUP (Herbarium of the Department of Plant Pathology, Shandong Agricultural University) and HMAS (Mycological Herbarium, Institute of Microbiology, Chinese Academy of Sciences).

Exserticlava manglietiae S.C. Ren & X.G. Zhang, **sp. nov.** Fig. 1

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Conidiophora macronematosa, nonramosa, erecta, laevia, atro-brunnea, apicem versus pallidiora, 6–11-septata, 360–490 × 5–8.5 µm. Cellulae conidiogenae polyblasticae, integratae, terminales, proliferationae sympodialiter. Conidia acrogena, holoblastica, solitaria, laevia, ellipsoidea, 1-distoseptata, pallide brunnea, 14–16 × 9–11 µm, ad basim truncata.

Type: CHINA. Gungdong Province: subtropical forest of Nanling, on dead branches of *Manglietia chingii* Dandy (*Magnoliaceae*), 10 Dec. 2010, Sh.C. Ren (**Holotype**, HSAUP H8363; **isotype** HMAS 146154).

Etymology: in reference to the host genus, *Manglietia*.

Colonies effuse, brown. Mycelium partly immersed, partly superficial, composed of septate, smooth, brown, branched hyphae. Conidiophores macronematous, mononematous, unbranched, erect, straight or slightly flexuous, smooth, thick-walled, dark brown, paler towards the apex, 6–11-septate, 360–490 × 5–8.5 µm, terminally swollen, 7.5–11 µm wide. Conidiogenous cells polyblastic, integrated, terminal, clavate, proliferating sympodially and producing a cluster of conidia. Conidial secession schizolytic. Conidia acrogenous, holoblastic, solitary, dry, smooth, ellipsoid, thick-walled, 1-distoseptate, very pale brown, 14–16 × 9–11 µm, base truncate.

Notes: *Exserticlava* species are separated primarily based on conidial shape and number of septa (Holubová-Jechová 1990). A key to species and a synopsis of their characters were provided by Tsui et al. (2001a). Of the six previously described *Exserticlava* species, *E. manglietiae* resembles *E. globosa* V. Rao & de Hoog (Rao & de Hoog 1986) in possessing concolorous, thick-walled conidia with a strictly median septum, but *E. globosa* produces spherical larger (17 × 21 µm diam) verrucose conidia. *Exserticlava uniseptata* Bhat & B. Sutton and *E. yunnanensis* L. Cai & K.D. Hyde also produce 1-septate conidia, but *E. uniseptata* can be distinguished by its broadly obovoid, larger conidia (15–20 × 11–14 µm) with a smaller basal cell and *E. yunnanensis* differs in hemispherical, pale brown to subhyaline, larger conidia (16–22 × 10–13 µm) with a smaller apical cell.

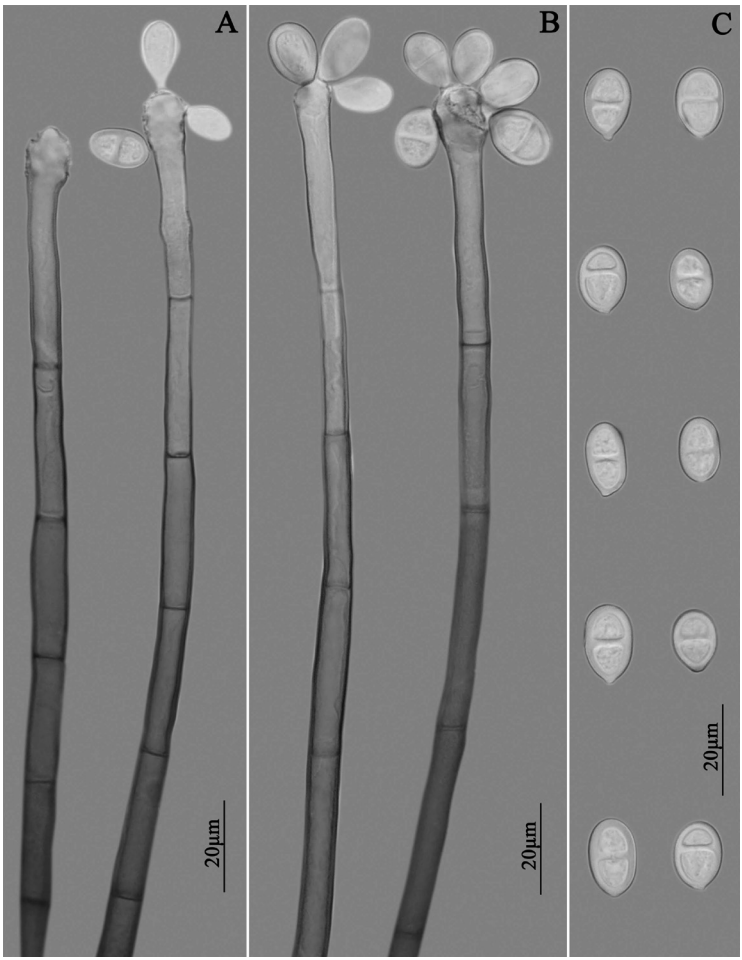

Fig. 1. *Exserticlava manglietiae*.
A–B. Conidiophores, conidiogenous cells and conidia. C. Conidia.

Spiropes terminaliae S.C. Ren & X.G. Zhang, **sp. nov.** Fig. 2

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Conidiophora singula vel fasciculate, superus fertilis parte geniculatis efformata, usque 340 μm longa, basi 4.5–6.5 μm crassa, apice 7–9 μm crassa. Cellulae conidiogenae polyblasticae, integratae, terminales et intercalares, proliferationes sympodialite. Conidia acropleurogena, solitaria, late fusiformia vel oblonga, 5–7-distoseptata, laevia, 27–32 × 8.5–10.5 μm.

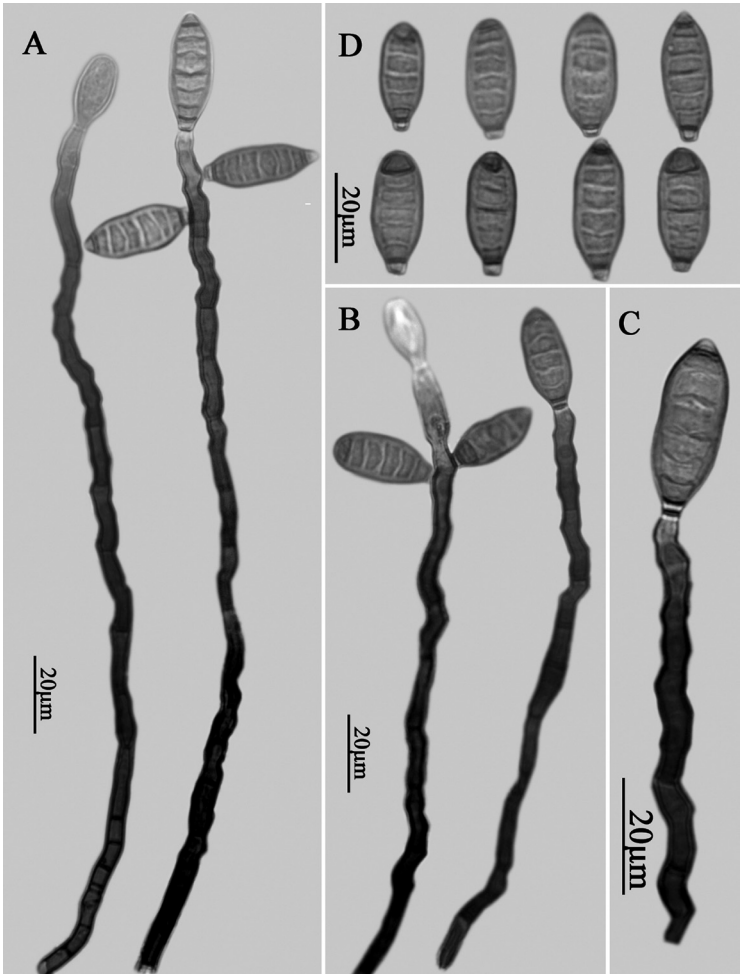

Fig. 2. *Spiropes terminaliae*.
A–C. Conidiophores, conidiogenous cells and conidia. D. Conidia.

Type: CHINA. Gungdong Province: subtropical forest of Nanling, on dead branches of *Terminalia mantaly* H. Perrier (*Combretaceae*), 15 Dec. 2010, Sh.C. Ren (**Holotype**, HSAUP H8218; **isotype**, HMAS 146155).

Etymology: in reference to the host genus, *Terminalia*.

Colonies on natural substratum effuse, dark blackish brown to black, hairy. Mycelium partly immersed and partly superficial, composed of branched, pale brown, smooth, septate, 2–4 μm thick hyphae. Conidiophores arising singly

or in groups terminally and laterally on the hyphae, erect, sterile lower part straight or flexuous, upper fertile part with zigzag proliferation, sometimes with geniculate fertile regions separated by sterile areas, brown to dark brown, paler toward the apex, with numerous dark conidial scars, 6–14-septate, up to 340 µm long, 4.5–6.5 µm wide at the base, 7–9 µm wide at the apex. Conidiogenous cells polyblastic, integrated, terminal and intercalary, sympodial, cylindrical, cicatrized, scars conspicuous. Conidia holoblastic, acropleurogenous, solitary, dry, broadly fusiform to oblong, brown to dark brown, smooth, 5–7-distoseptate, 27–32 µm long, 8.5–10.5 µm wide, 2.5–3.5 µm wide at the truncate base.

Notes: Of the known *Spiropes* species, *S. terminaliae* is closely related to *S. guareicola* in possessing macronematous unbranched conidiophores where the upper fertile part has geniculate proliferations and distoseptate conidia. However, *S. terminaliae* differs from *S. guareicola* in conidial shape, size, and the number of septa. The conidia of *S. guareicola* are broadly fusiform, much larger (25–52 × 10–13 µm), and with fewer septa (3–5).

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